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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,844	03/30/2004	Jonathan J. Hull	20412-08497	6502

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EXAMINER

STEVENS, ROBERT

ART UNIT	PAPER NUMBER
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2162

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/814,844

Applicant(s)

HULL ET AL.

Examiner

Robert Stevens

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. <u>20070116</u> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20061107</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Office Note

1. This Office Action is essentially identical to the previous Non-Final Action mailed 10/17/2006, with the exception that the previous rejections under 35 USC §101 have been replaced with new rejections under 35 USC §101. The time period for response has been reset with this Action.

Information Disclosure Statement

2. The information disclosure statement filed 12/27/2004 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because several of the non-patent literature articles are in Japanese (and no English translation of said articles has been provided). These articles are listed as citations C1, C10-C11, and C13-C18. They have been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. **Claims 1 - 45 are rejected under 35 U.S.C. 101** because the claimed invention is directed to non-statutory subject matter.

To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application with useful, concrete and tangible result.

A practical application can be either physical transformation or a useful, concrete and tangible result.

Regarding independent claims 1 and 16: These claims are directed to the formulation of a data set, but do not necessarily bring the data into existence in a form that enables any usefulness of having generated the data to be realized. In both instances, the claimed steps appear to be pure mathematical manipulations rather than a practical application of those manipulations with a tangible result that enables any usefulness of the results to be realized. For instance, a formatting of data appears in the claim language, but no use of that formatted data is recited.

Additionally, independent claim 1 is directed to software per se (i.e., a software system). This claim lacks the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. This claim is clearly not a series of steps or acts to be a process nor is it a combination of chemical compounds to be a composition of matter. As such, it fails to fall within a statutory category. This claim is, at best, functional descriptive material *per se*.

Claims 1 and 16, and other claims that depend on them, are not patent eligible because the invention recited therein does not produce a useful, concrete and tangible result.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 1 - 45 are rejected under 35 U.S.C. 112, second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1 and 25 each recite the limitation “[the] feature extraction information” in lines 6 and 5, respectively. There is insufficient antecedent basis for this limitation in the claim. It appears that the recited “features” in line 3 (of each claim) might be the intended antecedent basis, but it is noted that “feature” and “feature information” do not have the same meaning.

Further regarding independent claims 1 and 25: The preamble of each claim indicates the generation of a “representation of time-based media”, yet there is no positively recited generation step in either of these claims. As such, these claims appear to omit an essential step or element, as appropriate. Therefore, the scope of each of these claims is unclear. The Office notes that the recited formatting module of claim 1 appears to reflect an intended use of a generated media representation. Additionally, claim 25 formats “the representation”, but that “representation” isn’t actually created until claim 26. It is unclear how formatting can take place before the creation of the “representation”.

Further regarding claims 27-29: These claims each recite the limitation “the media data” in line 2 of each claim. There is insufficient antecedent basis for this limitation in the claim.

Claims 2-24 and 26-45 are dependent upon claims 1 and 25, respectively, and therefore are likewise rejected.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1-6, 11-31 and 35-43 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Sekiguchi et al. (US Patent No. 6,611,628, filed Nov. 17, 2000 and issued Aug. 26, 2003, hereafter referred to as "Sekiguchi") in view of Kanevsky et al. (US Patent No. 6,687,383, filed Nov. 9, 1999 and issued Feb. 3, 2004, hereafter referred to as "Kanevsky").

Regarding independent claim 1: Sekiguchi teaches *A system for generating a representation of time-based media*, (See Sekiguchi Abstract.) *the system comprising: a feature extraction module for extracting features from media content;* (See Sekiguchi Abstract, discussing feature extraction.) *and a formatting module for formatting a media representation generated by the system, the formatting module being communicatively coupled to the feature extraction module to apply feature extraction information to the representation,* (See Sekiguchi column 2 lines 55-60, discussing the generation of a feature stream.)

However, Sekiguchi does not explicitly teach the limitations as claimed. Kanevsky, though, discloses *wherein the formatting module formats the representation according to a*

representation specification. (See Kanevsky Figure 3 #35 “constraints” in the context of column 4 lines 2-11 discussing representation constraints.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Kanevsky for the benefit of Sekiguchi, because to do so provided a mechanism for hardcopy printing of multimedia data, as taught by Kanevsky in the Abstract. These references were all applicable to the same field of endeavor, i.e., multimedia encoding.

Regarding claim 2: Sekiguchi discloses *wherein the feature extraction module further comprises content recognition software for recognizing features in media content.* (See Sekiguchi column 3 lines 17-23, discussing object recognition.)

Regarding claims 3-4: Sekiguchi does not explicitly teach these limitations as claimed. Kanevsky, though, discloses output device driver interface and output device console. (See Kanevsky Figure 3 #80 print means in context of column 6 lines 5-6, discuss a printer output device, it being inherent/implicit that a device driver was necessary for the printer to work as intended.)

Regarding claim 5: Sekiguchi discloses *wherein the media representation is generated in digital format.* (See Sekiguchi column 4 lines 34-49, discussing generations and storage of a feature stream.)

Regarding claim 6: Sekiguchi does not explicitly teach these limitations as claimed. Kanevsky, though, discloses *wherein the media representation is generated in paper format*. (See Kanevsky Figure 3 #80 in the context of column 4 lines 20-22, disclosing printing out a “hardcopy”.)

Regarding claims 11-12: Sekiguchi discloses *wherein the media representation includes a graphical representation of media/audio content along a timeline*. (See Sekiguchi Figure 9 in the context of column 9 lines 43-46 teaching video content displayed along a timeline, it having been an obvious variant to one skilled in the art at the time of the invention as to what time-based data one displayed.)

Regarding claims 13-16: Sekiguchi discloses the use of timeline markers corresponding to media/audio content and having associated text/timestamp information (See Sekiguchi Figure 9 in the context of column 9 lines 43-46 teaching video content displayed along a timeline, it having been an obvious variant to one skilled in the art at the time of the invention as to what time-based data one displayed. Also see Sekiguchi column 13 lines 3-20, discussing the use of segment identifiers.)

Regarding claim 17: Sekiguchi discloses *wherein the media representation includes a header describing the media content*. (See Sekiguchi column 11 lines 27-30, discussing the use of header information.)

Regarding claim 18: Sekiguchi does not explicitly teach this limitation as claimed. Kanevsky, though, discloses *wherein the media representation is generated according to format specifications included in a data structure*. (See Kanevsky Figure 3 #35 “constraints” in the context of column 4 lines 2-11 discussing representation constraints.)

Regarding claims 19-20: Sekiguchi does not explicitly teach this limitation as claimed. Kanevsky, though, discloses the use of fields for specifying format and content. (See Kanevsky column 7 lines 45-52, discussing the use of tags and URLs as content indicators and XSL for formatting purposes.)

Regarding claim 21: Sekiguchi discloses the use of timeline markers corresponding to media/audio content and having associated text/timestamp information (See Sekiguchi Figure 9 in the context of column 9 lines 43-46 teaching video content displayed along a timeline, it having been an obvious variant to one skilled in the art at the time of the invention as to what time-based data one displayed. Also see Sekiguchi column 13 lines 3-20, discussing the use of segment identifiers.)

Regarding claim 22: Sekiguchi discloses *wherein the format specifications included in the data structure comprise a number of user-definable fields specifying the feature extraction applied to the media content.* (See Sekiguchi column 6 line 65 – column 7 line 6, discussing user interaction in the generation of a feature stream.)

Claims 23 and 24 are substantially similar to claims 3 and 6, respectively, and therefore likewise rejected.

Independent claim 25 is substantially directed to a method implemented by the system elements of claim 1. As such, this claim is substantially similar to claim 1, and therefore likewise rejected.

Regarding claim 26: Sekiguchi discloses *generating a representation of media content.* (See Sekiguchi column 2 lines 55-60, discussing the generation of a feature stream, and column 6 line 65 – column 7 line 6, discussing user interaction in the generation of a feature stream.)

Regarding claim 27: Sekiguchi discloses *wherein extracting features of media content further comprises performing keyword searching on the media data.* (See Sekiguchi column 6 lines 14-25, teaching keyword searching.)

Regarding claim 28: Sekiguchi does not explicitly teach this limitation as claimed. Kanevsky, though, discloses speaker recognition. (See Kanevsky column 7 lines 53-62, discussing speaker verification/identification.)

Regarding claim 29: Sekiguchi discloses *wherein extracting features of media content further comprises performing event detection on the media data*. (See Sekiguchi column 3 lines 9-12, teaching the use of “movement information”.)

Claims 30 and 31 are substantially similar to claims 11 and 12, respectively, and therefore likewise rejected.

Regarding claims 35-38: Sekiguchi discloses the use of timeline markers corresponding to media/audio content and having associated text/timestamp information (See Sekiguchi Figure 9 in the context of column 9 lines 43-46 teaching video content displayed along a timeline, it having been an obvious variant to one skilled in the art at the time of the invention as to what time-based data one displayed. Also see Sekiguchi column 13 lines 3-20, discussing the use of segment identifiers.)

Claims 39, 40 and 41 are substantially similar to claims 17, 5 and 6, respectively, and therefore likewise rejected.

Regarding claim 42: Sekiguchi does not explicitly teach this limitation as claimed. Kanevsky, though, discloses *wherein formatting the representation according to a representation specification further comprises defining the format of a media representation using a data structure with format specifications*. (See Kanevsky Figure 3 #35 “constraints”, in the context of column 4 lines 2-11 discussing representation constraints.)

Regarding claim 43: Sekiguchi does not explicitly teach this limitation as claimed. Kanevsky, though, discloses *inputting audio content and a representation specification into the system*. (See Kanevsky Figure 3 #25 “audio” input and #35 “constraints” input, in the context of column 4 lines 2-11 discussing representation constraints.)

9. **Claims 7-10, 32-34 and 44-45 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Sekiguchi et al. (US Patent No. 6,611,628, filed Nov. 17, 2000 and issued Aug. 26, 2003, hereafter referred to as “Sekiguchi”) in view of Kanevsky et al. (US Patent No. 6,687,383, filed Nov. 9, 1999 and issued Feb. 3, 2004, hereafter referred to as “Kanevsky”) and further in view of J. Graham et al. (“Video Paper: A Paper-Based Interface for Skimming and Watching Video”, ICCE '02, Jun. 18-20, 2002, pp. 214-215, hereafter referred to as “Graham”).

Regarding claims 7-10, 32-34 and 44-45: Sekiguchi does not explicitly teach these the use of bar codes as user selectable identifiers. Graham, though, discloses the use of barcodes on media representation (See Graham page 215 Figure 1, showing barcodes on a multimedia Video Paper document, and the first paragraph on page 215, discussing the reading/invoking of a bar code from a Video Paper document to launch a video on a TV or PDA. It was implicit that if the bar code existed on the Video Paper document of Figure 1, that the bar code had been “generated”. Further, the last paragraph on page 214 discusses associating time stamp information with the Video Paper system.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Graham for the benefit of Sekiguchi in view of Kanevsky, because to do so allowed a user to read a paper document and view only those parts of the video that are relevant to their needs, as taught by Graham in the Abstract. These references were all applicable to the same field of endeavor, i.e., multimedia encoding.

Art Unit: 2162

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Non-patent Literature

Dimitrova, Nevenka, et al., "Applications of Video-Content Analysis and Retrieval", IEEE Multimedia, July – September 2002, pp. 42-55.

Shahraray, Behzad, et al., "Automated Authoring of Hypermedia documents of Video Programs", ACM Multimedia '95 Electronic Proceedings, San Francisco, CA, Nov. 5-9, 1995, pp. 1-12.

Shahraray, Behzad, et al., "Pictorial Transcripts: Multimedia Processing Applied to Digital Library Creation", IEEE 0-7803-3780-8/97, © 1997, pp. 581-586.

Klemmer, Scott R., et al., "Books With Voices: Paper Transcripts as a Tangible Interface to Oral Histories", CHI Letters, Vol. 5 Issue 1, Apr. 5-10, 2003, pp. 89-96.

Graham, J., et al., "A Paper-Based Interface for Video Browsing and Retrieval", ICME '03, Vol. 2, Jul. 6-9, 2003, pp. 749-752.

Minami, Kenichi, et al., "Video Handling with Music and Speech Detection", IEEE Multimedia, July – September 1998, pp. 17-25.

US Patent Application Publications

Chadwick et al	2004/0240541
Nagasaki et al	2002/0199149
Echigo et al	2002/0159637

US Patents

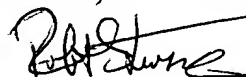
Moriya et al	7,031,965
Bolle et al	6,892,193
Lapstun et al	6,824,044
Zhang et al	6,298,145
Tanaka et al	6,519,360
Lewis et al	6,775,651
Kim et al	6,807,303
Kennedy	5,590,496
Black et al	4,998,215

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Stevens whose telephone number is (571) 272-4102. The examiner can normally be reached on M-F 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Robert Stevens
Examiner
Art Unit 2162

January 12, 2007


SHAHID ALAM
PRIMARY EXAMINER